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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,343

10/28/2003

William Freeman

15436.83.1

5606

22913

7590

04/18/2006

WORKMAN NYDEGGER

(F/K/A WORKMAN NYDEGGER & SEELEY)

60 EAST SOUTH TEMPLE

1000 EAGLE GATE TOWER

SALT LAKE CITY, UT 84111

EXAMINER

BUEKER, RICHARD R

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/695,343		FREEMAN ET AL.	
	Examiner		Art Unit	
	Richard Bueker		1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-13 and 15-28 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 19-28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,6,8,10 and 11 is/are allowed.
- 6) ☒ Claim(s) 7,12,13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's affirmation of election of claims 1-8 and 10-18 in the reply filed on 1/24/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 7 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 7 and 16, the phrase "the magnetic field" lacks proper antecedent basis.

Claims 12 and 15 stand rejected under 35 U.S.C. 103(a) as obvious over Cathey (6,027,619) (see figs. 5-7, for example), who discloses a physical vapor deposition apparatus which includes a fixed mask portion (see 128 of Fig. 7) which acts as a mask to protect the substrate from macroparticles by shielding the substrate from the macroparticles. It includes means for controlling throughput in the form of wires 74 wrapped in a spiral configuration to form an electromagnet, and baffles 68 which prevent macroparticles from being deposited on the substrate. Cathey teaches (Fig. 7) that the fixed mask portion can include a plurality of channels that extend through the fixed mask portion, with wires wrapped in a spiral configuration around each of the channels. Regarding the mounting hole of claim 12, the use of bolt holes in the flanges 64 and 66 of Cathey for attachment is obvious.

Claim 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Cathy (6,027,619) taken in view of Sathrum (6,139,964), who illustrates (see fig. 2a) an example of how an electromagnet is conventionally comprised of layers of windings.

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And it would have been obvious to use such a layered winding (including a top and bottom layer) in the fixed mask portion of Cathey.

Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Cathey (6,027,619) taken in view of Sanders (5,282,944) (see col. 4, lines 18-23) who teaches that electromagnet coils of an arc coating apparatus can successfully be controlled by computer-controlled power supplies. For that reason it would have been obvious to control Cathey's electromagnets using a computer controlled power supply.

Claims 12, 13, 15 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sathrum (6,139,964) taken in view of Cathey (6,027,619). Sathrum (see figs. 2, 2a, 3 and 3a, for example) discloses a physical vapor deposition apparatus which includes a fixed mask portion which acts as a mask to protect the substrate from macroparticles (see col. 13, lines 36-49) by shielding the substrate from the macroparticles. It includes means for controlling throughput in the form of electromagnet coil 51 wrapped in a spiral configuration to form an electromagnet, and baffles 81 which prevent macroparticles from being deposited on the substrate. While Sathrum illustrates one channel, Cathey teaches (fig.7) an analogous apparatus in which the fixed mask portion can include a plurality of channels that extend through the fixed mask portion, with wires wrapped in a spiral configuration around each of the channels. It would have been obvious to provide plural channels in Sathrum's apparatus because Cathey teaches that plural channels allows for physical vapor deposition on a wider area of a substrate.

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Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Sathrum (6,139,964) taken in view of Cathey (6,027,619) for the reasons stated above, and taken in further view of Sanders (5,282,944) (see col. 4, lines 18-23) who teaches that electromagnet coils of an arc coating apparatus can successfully be controlled by computer-controlled power supplies. For that reason it would have been obvious to control Sathrum's electromagnets using a computer controlled power supply.

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claim 9 contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Non-elected Claim 9 is dependent on claim 1, and therefore includes all of the limitations of claim 1, including the recited spiral arrangement of wires recited in claim 1. It is noted that claim 9 is directed to the non-elected embodiment including strips of material having a high coefficient of expansion and is not under examination with respect to the prior art. It is further noted, however, that applicants' specification as originally filed did not disclose the use of a spiral arrangement of wires in combination with strips of material as recited in claim 9. Therefore, claim 9 as presented on amendment constitutes new matter.

Claims 1, 3, 4, 6, 8, 10 and 11 are considered to be allowable over the prior art of record.

Claim 7 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants' arguments regarding Cathey have been considered but are not convincing. Fig. 7 of Cathey illustrates plural channels. Each channel is wrapped with a wire in a spiral arrangement. The channels of Fig. 7 prevent particles from reaching the substrate to be coated and they therefore mask the substrate from the particles. Also, the "portion" of Cathey's apparatus that includes the channel is a "mask portion".

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

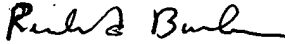
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (571) 272-1431. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Richard Bueker
Primary Examiner
Art Unit 1763